

said certain ones of said plurality of haptic elements are ones of said plurality of haptic elements being touched.

7. The input/output device of claim 6, wherein said processor is further configured to cause contiguous haptic elements of said certain ones of said plurality of haptic elements to collectively produce a haptic effect.

8. The input/output device of claim 6, wherein said processor is configured to cause said contiguous haptic elements to collectively produce a haptic effect by virtue of being configured to calculate a weighted average of a force experienced by each one of said contiguous haptic elements.

9. The input/output device of claim 6, wherein new haptic elements of said plurality of haptic elements are added to a set of haptic elements in response to said new haptic elements also being touched and old haptic elements in said set of haptic elements are removed from said set of haptic elements in response to said old haptic elements no longer being touched, wherein said set of haptic elements represents said contiguous haptic elements.

10. The input/output device of claim 1, further comprising:

a display, coupled to said plurality of haptic elements, wherein

said each one of said plurality of haptic elements correspond to one of a plurality of areas displayed on said display, and

said haptic effect provided by said at least one of said plurality of haptic elements is related to a one of said plurality of areas displayed on said display corresponding to said at least one of said plurality of haptic elements.

11. The input/output device of claim 1, wherein

said at least one of said plurality of haptic elements corresponds to one of a plurality of areas displayed on a display; and

said haptic effect provided by said at least one of said plurality of haptic elements is related to information displayed in said one of said plurality of areas.

12. The input/output device of claim 1, wherein certain ones of said plurality of haptic elements are configured to provide a haptic response at a respective contact surface of said certain ones of said plurality of haptic elements in response to said respective contact surface of said certain ones of said plurality of haptic elements being touched.

13. The input/output device of claim 12, wherein each one of said certain ones of said plurality of haptic elements is configured to provide concurrent input and output when touched concurrently.

14. The input/output device of claim 12, wherein said certain ones of said plurality of haptic elements are configured to provide input from and output to concurrent touches in a plurality of locations.

15. The input/output device of claim 12, wherein each one of said certain ones of said plurality of haptic elements further comprise an actuator coupled to a corresponding contact surface and configured to provide force feedback to said corresponding contact surface.

16. The input/output device of claim 15, wherein said actuator comprises a linear electromagnetic actuator, wherein said contact surface is coupled to said linear electromagnetic actuator.

17. The input/output device of claim 16, wherein said actuator further comprises a spring, wherein said spring is coupled to said contact surface to maintain said actuator in an extended position when said contact surface is not being touched.

18. The input/output device of claim 15, wherein said each one of said plurality of haptic elements further comprises a force sensor coupled between said contact surface and said actuator.

19. The input/output device of claim 18, wherein said force sensor is a piezoelectric force sensor.

20. The input/output device of claim 12, wherein said certain ones of said plurality of haptic elements are further configured to provide a given haptic effect in a cooperative manner.

21. The input/output device of claim 12, wherein said certain ones of said plurality of haptic elements provide a given haptic effect in a cooperative manner by summing forces on ones of said certain ones of said plurality of haptic elements being touched, taking a weighted average of positions of said ones of said certain ones of said plurality of haptic elements being touched, and combining this information in order to determine a desired feedback force for each one of said ones of said certain ones of said plurality of haptic elements being touched.

22. A computer system comprising:

a processor;

a display, coupled to said processor; and

an input/output device, coupled to said processor and comprising a plurality of haptic elements, wherein

each one of said plurality of haptic elements comprises a contact surface,

said contact surfaces define a surface, and

at least one of said plurality of haptic elements is configured to produce a haptic effect at a contact surface of said at least one of said plurality of haptic elements in response to said contact surface being touched.

23. The computer system of claim 22, further comprising:

a sensor coupled to said contact surface of said at least one of said plurality of haptic elements;

a processor, coupled to said sensor and said at least one of said plurality of haptic elements, wherein

said sensor is configured to generate information upon said contact surface being touched, and

said processor is configured to control said haptic effect provided by said at least one of said plurality of haptic elements based on information received from said sensor;

24. The computer system of claim 22, further comprising:

a display, coupled to said plurality of haptic elements, wherein

said each one of said plurality of haptic elements correspond to one of a plurality of areas displayed on said display, and

said haptic effect provided by said at least one of said plurality of haptic elements is related to a one of said